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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
COY, NICOLE A	
ART UNIT	**PAPER NUMBER**
3672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 10/685,296	**Applicant(s)** MACKAY ET AL.	
	Examiner Nicole Coy	**Art Unit** 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 September 2005.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2,4-8,11,13-26,29,30 and 33-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) 2,4-8,11,13-26,29,30 and 33-35 is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on 9/30/2005 is/are: a)☐ accepted or b)☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following reasons:

(1) connection member is not clearly shown in figures 2 and 3;

(2) The section lines in figures 1A-1C must be roman or Arabic numerals

(3) The brief description of the drawings for figures 4A-4E must indicate what section line in figures 1A-1C they refer to.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 20-26, 29, and 30 are objected to because of the following informalities: There is no antecedent basis for "the safety valve" in claim 20 at line 7. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2, 5-7, 13-15, 18, 19, and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Head (USP 6,234,247).

With respect to claim 2, Head discloses an apparatus for use with a downhole pumping system to facilitate fluid flow in a tubular, comprising: a subsurface valve for regulating fluid flow through the tubular (24, 34), the subsurface valve having a bore in fluid communication with the tubular (see figures 3 and 11); and a connection member for supplying energy to the downhole pumping system (see figure 3, column 1 lines 57-60, and column 3 lines 18-41), wherein a portion of the connection member is disposed in the bore and the valve integrity is maintained (see figures 11-13).

With respect to claim 5, Head discloses a tubing insert for transporting fluid to the surface (see column 3 lines 18-23).

With respect to claim 6, Head discloses that a portion of the connection member is disposed in an annulus defined by the tubing insert and the tubular (see figures 12 and 13).

With respect to claim 7, Head discloses at least one electrical adapter for routing the connection member between an exterior and an interior of the valve (see figures 12 and 13).

With respect to claim 13, Head discloses a liquid conduit extending from the valve to the pumping system (see figure 13A).

With respect to claim 14, Head discloses an annulus defined by the liquid conduit and the tubular (see figure 13A).

With respect to claim 15, Head discloses a second portion of the connection member disposed in the annulus (see figures 12 and 13).

With respect to claim 18, Head discloses that the tubular comprises a production tubing (see figure 3 numeral 26).

With respect to claim 19, Head discloses that the connection member is selected from the group consisting of cable, electric wire, tubing, and rod (see column 3 lines 18-41, wherein Head discloses an electric cable).

With respect to claim 33, Head discloses a method of actuating a downhole tool disposed in a tubular, comprising: locating a valve in the tubular upstream from the downhole tool (24), the valve adapted to block fluid communication in the tubular (24); installing a connection member (27) in the interior of the tubular (26), wherein the connection member (27) is cable of providing energy to the downhole tool (28); and supplying power downstream to the downhole tool (wherein connection member 27 is capable of supplying power to the downstream tool).

With respect to claim 34, Head discloses integrating the connection member with the valve (see figures 11-13).

With respect to claim 35, Head discloses that the valve comprises a safety valve (see column 3 lines 18-23).

5. Claims 2, 4-7, 11, 18, 19, 20, 21, 29, 30, and, 33-35 rejected under 35 U.S.C. 102(b) as being anticipated by Bayh, III (USP 4,749,341).

With respect to claim 2, Bayh, III discloses an apparatus for use with a downhole pumping system to facilitate fluid flow in a tubular, comprising: a subsurface valve for regulating fluid flow through the tubular (see figure 1 numeral 39), the subsurface valve having a bore in fluid communication with the tubular (see figure 1); and a connection member for supplying energy to the downhole pumping system (see figure 1 numeral 35), wherein a portion of the connection member is disposed in the bore and the valve integrity is maintained (see figure 1).

With respect to claim 4, Bayh, III discloses a locking mandrel for engaging the tubular (see figure 1 numeral 42).

With respect to claim 5, Bayh, III discloses a tubing insert for transporting fluid to surface (see figure 1 numeral 22).

With respect to claim 6, Bayh, III discloses a portion of the connection member disposed in an annulus defined by the tubing insert and the tubular (see figure 1).

With respect to claim 7, Bayh, III discloses at least one electrical adapter for routing the connection member between an exterior and an interior of the valve (see figure 1).

With respect to claim 11, Bayh, III discloses that a portion of the bore is offset relative to a central axis of the valve (see figure 1).

With respect to claim 18, Bayh, III discloses that the tubular comprises production tubing (see figure 1).

With respect to claim 19, Bayh, III discloses that the connection member is selected form the group consisting of cable, electric wire, tubing, and rod (see figure 1).

With respect to claim 20, Bayh, III discloses a method of removing liquid from a well having a production tubing, comprising: installing a valve in the production tubing, wherein the valve is adapted to open or close fluid communication through the production tubing (see figure 1 numeral 39); locating a pumping system below the valve (see figure 1 numeral 36); and providing a connection member in the production tubing to supply energy to operation the pumping system, wherein the integrity of the safety valve is maintained (see figure 1 numeral 35).

With respect to claim 21, Bayh, III discloses transporting liquid to the valve through a liquid conduit (see figure 1).

With respect to claim 29, Bayh, III discloses integrating the connection member with the valve (see figure 1, wherein cable 35 is integrated with valve 39).

With respect to claim 30, Bayh, III discloses that the connection member comprises a cable (see figure 1).

With respect to claim 33, Bayh, III discloses a method of actuating a downhole tool disposed in a tubular, comprising: locating a valve in the tubular upstream from the downhole tool (see figure 1 numeral 39 and column 7 lines 54-57), the valve adapted to block fluid communication in the tubular (see figure 1 numeral 39); installing a connection member in the interior of the tubular (see figure 1 numeral 36), wherein the connection member is capable of providing energy to the downhole tool (see column 7 lines 54-57); and supplying power downstream to the downhole tool (see column 7 lines 54-57).

With respect to claim 34, Bayh, III discloses integrating the connection member with the valve (see figure 1).

With respect to claim 35, Bayh, III discloses that the valve comprises a safety valve (see figure 1 numeral 39 and column 2 lines 55-66).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Head in view of Vinzant et al. (USP 4,461,353).

Head does not teach the apparatus further comprising a locking mandrel for engaging the tubular, or the valve mating with a valve nipple. Vinzant et al. suggests that the use of a locking mandrel (20) and a valve nipple (21) are common and well-known in the art when incorporating a retrievable safety valve (19) into a well system. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the safety valve system of Head to include the locking mandrel and valve nipple of Vinzant et al. in order to provide an improved safety valve wherein the retrievable portion is shorter and low in weight for economy and ease of installation, operation, and retrieval.

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Head in view of Beauquin (USP 6,250,384).

Head does not disclose that the gas flows up the annulus and the liquid flows up the liquid conduit or wherein the liquid and the gas are mixed before entering the safety valve. Beauquin suggests that in producing an oil and gas mix it is useful to mix and recombine liquid and gas in order to lighten the column of effluent contained in the tubing. See column 3 lines 46-50. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the pumping system of Head to include the liquid-gas mixing capabilities of the Beauquin pumping system in order to make it easier to raise the mixture to the surface.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bayh III in view of Beauquin.

Bayh, III does not disclose that the gas flows up the annulus and the liquid flows up the liquid conduit or wherein the liquid and the gas are mixed before entering the safety valve. Beauquin suggests that in producing an oil and gas mix it is useful to mix and recombine liquid and gas in order to lighten the column of effluent contained in the tubing. See column 3 lines 46-50. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the pumping system of Bayh, III to include the liquid-gas mixing capabilities of the Beauquin pumping system in order to make it easier to raise the mixture to the surface.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bayh III in view of Crow et al. (USP 5,823,265).

Bayh, III does not disclose an apparatus wherein installing the safety valve and locating the pumping system is performed in one trip. Crow et al. suggests that using a running tool and installing the well control valve assembly (200), with the production string hanging therefrom is necessary to improve the economics of well completion by reducing rig time. See column 2 lines 66-67 and column 6 lines 45-48. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the one trip installation of Crow et al. into the safety valve installation of Bayh III in order to reduce well completion costs.

11. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayh, III in view of Head.

With respect to claim 24, Bayh, III does not teach removing a pre-existing valve before installing the valve. However, Head teaches removing a pre-existing valve before installing a valve in the event of any damage or fault in the safety valve. See column 4 lines 13-26 and column 2 lines 9-19. It would have been obvious to modify the apparatus of Bayh, III by removing a pre-existing valve before installing a valve as taught by Head in order to remove valves in the event of any damage or fault in the safety valve.

With respect to claim 25, Bayh, III does not teach that at least a portion of the connection member is disposed in the valve. Head teaches that a least a portion of the connection member is disposed in the valve in order to prevent any damage to an external cable. See figures 11-13 and column 2 lines 9-10. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bayh, III by disposing at least a portion of the connection member in the valve as taught by head in order to prevent external damage to the cable.

With respect to claim 26, Bayh, III does not teach routing the connection member from the exterior of the valve to the interior of the valve. Head teaches routing the connection member from the exterior of the valve to the interior of the valve in order to eliminate the risk of external damage to the cable. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bayh, III by routing the connection member from the exterior of the valve to the interior of the valve as taught by Head in order to eliminate the risk of external damage to the cable.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 8:00-5:30, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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